

plane at right angles to the axis of vision, and hence the lens will become more spheroidal, and consequently, more refractive; that is, adapted for the vision of objects at small distances. The hydrostatic pressure in question, is believed to be conveyed from the humours of the eye, between which the lens is delicately suspended, and to originate in the compressing action of the muscles which move the eyeball acting simultaneously on the tough sclerotic coat.

The author thus sums up the evidence which he thinks gives probability to this explanation.

1. The form of the surface of the lens might have been such as to correct aberration without any variety of density whatever. But, on the contrary, it has a form which exaggerates the ordinary spherical aberration. A form which, therefore appears to be adapted to the rapid variation of density in the lens, which must therefore be presumed to have some distinct mechanical utility.

2. The effort to view near objects is accompanied in most, if not all persons, by a sensible muscular effort.

3. This theory is free from the various conclusive objections urged by Dr. Young against all explanations which do not turn upon a change of figure of the lens; and is also free from the difficulties to the admission of Dr. Young's theory—the muscularity of the lens itself.

4. When the lens is reproduced, after the operation for cataract, the power of adjustment is greatly diminished or wholly lost, since the variable elasticity will be wanting.

5. The diminution of the adjusting power of the eye in old age, is explained by the increased rigidity of the lens and consequent incompressibility.

6. The crystalline lens polarizes light in a manner similar to that exerted by glass and other uncrystallized substances, in a state of constraint, that is possessing unequal elasticity in different directions.—*Proceedings of the Royal Society of Edinburgh*, No. 25.

61. *Amaurosis—Fungoid Tumour at the base of the Cerebellum.*—The following interesting example of this is recorded by Mr. H. TAYLOR in the *Lancet*, (Aug. 23, 1845.)

Mr. T—, a married man, of good conformation, nervous temperament, and fair complexion, having large prominent eyes, with blue irides, appears to have been subject to severe headaches from an early age, but otherwise enjoyed good health, until eight or nine years ago, when he became affected with dyspepsia, which was attributable to a habit of eating his meals hurriedly, and without any regard to wholesome diet, at the same time he was sedulously engaged in business. He was then troubled with flatulence, noises in the head, and total deafness in the left ear.

In the beginning of 1840, being then forty years of age, he found his eyesight fail, with frequent lachrymation and muscæ volitantes. There was then no obvious change in the pupil, and the conjunctiva was merely in a relaxed state. As the gastric disturbance was also much increased, the failure of sight was referred to this, and by the prescription of Mr. Ware he was bled, took Plummer's pill, and used astringent collyria, with but little benefit. In July of the same year he had an attack of articular rheumatism, and from this time became subject to increased action of the heart.

In January, 1841, he consulted Mr. Tyrrell, who pronounced him to be amaurotic, and considering the case, from the first, as of cerebral origin, but not despairing of a recovery, he put him upon a strict regimen, and prescribed an alterative course of mercurials and sarza, with occasional purgatives. Contra-irritation was kept up by blisters on the forehead and behind the ears. Ointments of iodine and of veratrina were successively tried: our patient was also cupped occasionally over the occiput and nape of the neck, and a seton was kept introduced in the latter situation for many months.

This plan of treatment was rigorously pursued for two years without any good result. His sight had now become so bad, that he could not walk out unassisted. The pupils were much dilated, though still obedient to a strong light, and the globes appeared more prominent and firmer than natural. His headache recurred with greater severity, chiefly affecting the left side of the occiput.

In January, 1842, he was attacked with neuralgic pains, commencing in the left sciatic notch, and extending, in the course of the sciatic nerve, to the outer side of the knee, and down the leg as far as the ankle. The pain, which was agonizing, occurred in paroxysms, and seemed to increase by exercise of the limb, and to subside altogether at night, or on his assuming the recumbent posture.

No very marked relief was obtained from blistering in the course of the nerve, nor from the endermic use of morphia and opiate frictions; neither was the internal exhibition of narcotics any more successful, and the pains only wore off as his increasing debility obliged him to keep his bed. Mr. Tyrrell saw him occasionally at this period, and gave as his opinion that the neuralgia, as well as the amaurosis, were dependent on a tumour at the base of the cranium; and with this impression of the case, all acute treatment was relinquished, and only such medicines were given as the state of the digestive organs might require. There was now very great impairment of muscular power generally, but no paralysis nor loss of common sensibility. The left leg wasted visibly, at the same time that he was becoming generally emaciated. His appetite, however, continued good, and latterly it was found difficult to satisfy his wants; the bowels were so torpid as to require the almost daily administration of purgatives.

In November, 1842, he had several attacks of delirium, with excitement, like that of drunkenness, which were followed by stupor; these afterwards assumed much of the character of epilepsy, there being clonic convulsions, usually in the night, and occurring at intervals of a month.

From this time he remained in bed from sheer exhaustion, and sank into a state of apathy, with apparent moroseness of temper; he expressed himself well in conversation, but with much slowness, as if a great effort were necessary to collect his ideas; and when roused he seemed to have the full use of his mental faculties. The senses of taste and smell were not at all impaired; his hearing on the right side was very good, but vision was now completely extinguished, so that there was no perception of light left. There does not seem to have been any excitement of the sexual appetite, and all that could be elicited from the nurse on this point was, that he had lost all sense of decency. He lingered on in this state during sixteen months more: at the conclusion his urine and feces were passed unconsciously; and during the oppressive weather of August, 1844, his appetite failing him, in a few days he expired.

An examination of the body was made sixteen hours after death. The bones of the skull were thin, and the diploe scarcely visible. The dura mater was healthy, and not unusually adherent. The vessels of the pia mater were much congested, and serum was effused extensively into the cellular tissue between the convolutions. The brain was extremely firm, and on dissection presented a great number of large bloody points. The lateral ventricles were distended with clear serum, of which four or five ounces were collected. The septum lucidum was broken down; the choroid plexuses were shrunk and pale, and had several small serous cysts formed on them. On removing the brain, the optic nerves were observed to be very small, and of firm consistence; on cutting away the attachments of the tentorium, a bulging of it was seen on the left side, and when this was punctured, about half an ounce of gelatinous fluid, of a greenish colour, escaped. The cerebellum was now raised up, and under its left hemisphere a tumour was discovered, lying on the petrous portion of the temporal bone, and firmly attached to the auditory foramen. There were also extensive connections between it and the cerebellum, which was hollowed out to receive it. In attempting to dissect it out, so as to preserve its relations to the cerebellum, the morbid growth was found to have extended some way into the auditory canal, which was widened considerably, and the surrounding bone appeared to be eroded. The tumour, when removed, was an oval mass, compressed from above downwards, and having the following measurements:—Length, two inches, greatest width, one inch and a third, and vertically, one inch. Its surface was lobulated, and studded with small serous cysts, the colour of a darker tint than the brain, owing to the greater vascularity of its coverings; these consisted of the arachnoid membrane and a thin cellular layer, which were continuous with the investments of the cerebellum, forming the only bond of union between them. Situated in the angle between the lateral mass of the cerebellum and its large peduncle, it pressed

also on the pons varolii. The seventh nerve, and the divisions of the eighth, passed under it to their respective foramina, without being at all flattened or displaced.

A section of the tumour showed a dense structure of glandular firmness, made up of whitish arborescent fibres, leaving numerous interstices, which contained some gelatinous serum. The stræ of white tissue were speckled here and there with black points, which proved to be coagulated blood, and sections of minute vessels. One half was shown to Dr. Walshe, who considered it to be a variety of encephaloid cancer, and rare, as occurring in the membranes, and not in the substance of the cerebellum.

In the thorax, the heart was found much enlarged, from dilated hypertrophy of the left ventricle. There were several patches of cartilaginous deposit at the bases of the mitral valves, and the aorta was somewhat dilated at its commencement, but healthy in its valves and lining membrane.

Old adhesions existed between the ribs and middle and lower lobes of the left lung; the latter organ was much congested, and the bronchiæ filled with frothy mucus.

In the abdomen, there was nothing worthy of notice besides the kidneys, which were in an advanced stage of granular degeneration.

65. *Congenital Opacity of the Cornea.*—Dr. P. W. MACLAGAN relates (*London & Edinburgh Monthly Journ. of Med. Sci.*, July, 1845) a case in which the eyes four-teen hours after birth presented the following appearance:—

“On neither was there the slightest trace of vascularity or purulent discharge; the left cornea was completely opaque; the right was in the same condition, on its inferior two-thirds, but the upper third was clear, the opacity terminating by a tolerably defined edge. At first, I thought that I could perceive this edge to change its position, as the child’s head was inclined to one side or the other, which led me to suppose the opacity resided in the aqueous humour; but this I found to be a mistake. Never having seen such a case, and not being able to hear of one, I was led to form an unfavourable prognosis; but in this I was agreeably disappointed; for in a few weeks the edge of the opacity on the right cornea began to thin off, to become less defined, and at length to recede, so that a part of the pupil could be seen on looking straight at the eye, whilst at first it could only be observed by looking from above. It was long before any change could be perceived on the left eye; but about the beginning of January, *i. e.*, three months after birth, it too began to improve—the opacity at the upper part of the cornea becoming more diluted-looking, and by degrees disappearing. At this time it was curious to observe the infant instinctively depressing the eyeball, when any bright object was held before it, so as to permit its image to fall through the upper portions of the cornea.

When I was removed from that post, a few days ago, the improvement was gradually progressing. There is now only a small portion of the right cornea opaque, and the upper half of the left is tolerably clear.

## MIDWIFERY.

66. *Simple Ulcers of the Neck of the Uterus.* By Dr. ROONETTA.—Boyer denied the existence of simple ulcers of the os uteri, doubtless, in consequence of the little use made of the speculum in his time. Nevertheless, there is no more frequent disease, and it may be asserted that every woman who has leucorrhœa, lactescent or purulent, is affected with it, if they have not cancer. Five or six varieties of this affection are at this time under treatment in the wards of M. Jobert, Hôpital St. Louis, where we have had an opportunity of leisurely studying them by means of the speculum. It is so rare in private practice to have an equal number of patients under observation at one time, and so inconvenient, moreover, to examine them in a suitable manner, that the present opportunity of doing so is interesting. The disease, as far as regards the ulceration, presents itself under various forms;